
International Solutions to Currency Mismatching?

The previous two chapters laid out in detail the emerging-market policies that can help reduce currency mismatches. Is there also a role for the international community and, if so, what is it?

First of all, we are not persuaded by Eichengreen, Hausmann, and Panizza (2002) that creating an emerging-market currency basket and encouraging the international financial institutions (IFIs) and G-10 governments to issue debt in that composite currency is the approach most likely to succeed in mitigating the currency mismatch problem. Very small economies are, of course, more vulnerable than large ones. And it is certainly true that liquidity factors and network externalities lie behind the emergence of “vehicle” and reserve currencies. Nevertheless, such elements do not justify a new currency basket index. The track record of such indices—even those including the major currencies—has not been impressive. There are simpler and more straightforward ways both of unbundling currency and credit risk for emerging-market borrowers and of making debt obligations more contingent on the borrower’s ability to pay.

A central empirical result of Eichengreen, Hausmann, and Panizza (2002, 2003e) is that the only variable that is robust in explaining cross-country differences in original sin is economic size—measured by a country’s total GDP, or its total domestic credit, or its total trade, or the principal component of the first three measures. In cases where countries have less original sin than predicted from their economic size, the explanation offered is either that they are financial centers (the United Kingdom and Switzerland) or that nonresidents (especially IFIs) have issued the bulk of the international debt denominated in local currencies (as in Poland, South Africa, and the Czech Republic). Nonresidents are said to have

denominated debt in local currencies because emerging-market borrowers were willing to pay them a premium to swap out of the latter's dollar liabilities. The authors of the original sin hypothesis (OSH) also argue that in a world with transactions costs, the optimal portfolio will have a finite number of currencies, and that with each additional currency added to that portfolio, the benefits of diversification will fall faster than the costs.

All this leads Eichengreen, Hausmann, and Panizza (2002) and Eichengreen and Hausmann (2003a, 2003c) to offer an "international" solution to the original sin problem. They propose that an emerging-market (EM) index be created, composed of an inflation-indexed basket of the currencies of roughly the 20 or so largest emerging economies, with the weights in the basket corresponding to each country's GDP (at purchasing power parity). The World Bank and other multilateral institutions would issue debt denominated in this index, undoing any currency mismatch on their own balance sheets by converting a portion of their existing loans into claims denominated in the inflation-adjusted currencies of each of the countries included in the index. G-10 sovereigns would also be asked to issue debt in the EM index and would swap their currency exposure with countries whose currencies were included in the EM index. By so doing, emerging-market borrowers would get rid of their dollar-denominated liabilities (i.e., their original sin). Institutional investors and mutual funds would be encouraged to create products that added credit risk to the index as a way of further encouraging the development of the market. Once the market for the new currency basket index was sufficiently developed, the role of the IFIs and the G-10 governments could be scaled back. The OSH authors maintain that their new basket index and plan have several desirable characteristics, including a better separation of credit and currency risk, the creation of an attractive form of diversification for institutional and retail investors, and a better matching of emerging-market debt obligations with the debtor's ability to pay.

Since measures of original sin are highly correlated with country size, it is hard to know if emerging economies with relatively high degrees of output and capital-account volatility and relatively low credit ratings (the so-called "pain" of original sin) are at a disadvantage because they have high levels of original sin or because their economies are small. There are many indications that emerging economies with very small financial systems are more vulnerable to economic instability and financial crises—and not just because of original sin or currency mismatch more broadly defined. Caprio and Honohan (2001) note that more than 150 countries have banking systems with total assets of \$10 billion or less. They go on to argue that small financial systems underperform because they suffer from a concentration of risks (i.e., from low diversification), because they provide few services at higher unit costs (reflecting low competition and

less ability to exploit economies of scale), and because regulation and supervision of small systems are disproportionately costly. McCauley and Remolona (2000) suggest that government bond markets that are smaller than \$100 billion to \$200 billion are apt to be less liquid than would be desirable.¹ Many of the best companies in emerging economies choose to list their shares on the larger stock exchanges in the major industrial countries to reap the advantages of greater liquidity and a wider investor base. Goldstein (2002) observes that most countries that have adopted either currency boards or formal dollarization tend to be very small economies, and many analysts (e.g., see Mussa et al. 2000) conclude that very small economies are better off adopting fixed exchange rate regimes.

To compensate for their size, small countries typically respond with measures to increase diversification or with “outsourcing” of services to larger countries with better liquidity and scale advantages, so that residents of small countries still get access to good financial services even if they do not produce such services.

We go some way in this direction by recommending that emerging economies reduce barriers to entry for foreign-owned banks, and that mutual and pension funds in emerging economies relax restrictions on investment in foreign assets. Our point is that small economic and financial size does indeed create challenges for many developing countries, but there is no presumption that creating a currency basket index for denominating debt is the only or best way to compensate for it—or for currency mismatch per se.

A similar argument can be made for the implications of networking externalities and transactions costs. Frankel (1995, 9) captures the notion of network externalities when he defines an international currency as “one that people use (internationally) because everyone else is doing it.” The theory of “vehicle” currencies also gives a prominent role to transactions costs when it suggests that vehicle currencies will emerge whenever indirect exchange costs between the vehicle are lower than direct exchange costs between the two nonvehicle currencies (Chrystal 1984). Although Eichengreen, Hausmann, and Panizza (2002) concentrate on the currency denomination of debt contracts, the “international” dimension of currency use is much broader, encompassing, *inter alia*, the currency composition of international reserves and of exchange rate pegs, currency invoicing in international trade, and the private holding of currency abroad. In addition, the literature on the emergence of international currencies indicates that many factors are involved, including control of inflation; behavior of

1. Flandreau and Sussman (2002), reviewing emerging-market borrowing in the 19th century, also argue that market liquidity was the key factor in explaining the currency composition of initial public offerings of governments in foreign markets and secondary-market trading of bonds.

the nominal exchange rate; net creditor/debtor position; economic size; open, deep, and broad financial markets; official attitudes toward international currency use; and advantages of incumbency (Frenkel and Goldstein 1999). Moreover, the most successful “international” currencies are those that carry out simultaneously all the functions of money (medium of exchange, unit of account, and store of value). It is one thing to argue that these characteristics of international currencies (particularly economic size, anti-inflation credibility, and synergies among the various functions of money) portend well for the future international role of the euro. It is another to argue that an emerging-market currency basket that contains the currencies of many small economies and that is to be used mainly as a unit of account to denominate debt contracts can also grab substantial market share from incumbent reserve currencies. Our point here is that the role of network externalities and transactions costs in the evolution of international currencies does not inexorably lead to an international solution to the currency mismatch problem of emerging economies.

Nor have the last three decades of experience with currency baskets (created outside monetary unions) been kind to the case for the proposed new index. We point to two examples. The first is the IMF’s special drawing right (SDR), created in the late 1960s by full international agreement and aimed at becoming “the principal reserve asset in the international monetary system.” Indeed, at the time of its creation, the SDR’s diversification properties were thought to confer on it such an advantage over each of the incumbent reserve currencies that it was regarded as desirable to put some restrictions on the SDR’s use to prevent an excessively rapid switch out of the existing reserve currencies. Suffice it to say it has not worked out this way, with the SDR’s share of foreign exchange reserves falling from 6 percent at its peak in 1981 to about 1 percent in 2002, and this despite substantial official support, including using the SDR as the unit of account for all IMF operations. It is relevant to also recall that whereas the SDR was originally constructed as a weighted average of the 16 major currencies, the number of currencies in the basket was later reduced to just the five major currencies. If the advantages of diversification fall as rapidly with each additional currency, as Eichengreen, Hausmann, and Panizza (2002) suggest, why should the basket contain so many currencies (20 or more)? In addition, as a recent IMF (2003a, 85) report notes, stronger emerging-market players may not find it advantageous to participate in the index because of concerns that others may engage in strategic devaluation (days before their coupons are fixed) to lower their debt obligations.

The second example is the Emerging Local Markets Index (ELMI) that JP Morgan created in 1996 and updated to the ELMI+ the following year, 1997. The ELMI+ tracks total returns for local currency-denominated market instruments in 24 emerging economies—the vast majority of which also appear in the index proposed by Eichengreen, Hausmann, and Panizza

(2002). Admittedly, the ELMI+ and the index proposed by Eichengreen, Hausmann, and Panizza (2002) have some nontrivial differences—including that the ELMI+ is not inflation-indexed and that it tracks money-market returns, not currencies exclusively. But the bottom line is that despite the alleged strong diversification benefits of the ELMI+ index, it has so far attracted very little interest from the Belgian dentist and other global investors.

We too regard an unbundling of credit and currency risk as helpful to emerging economies since it permits a reallocation of currency risk to those most willing and best placed to bear it. But this unbundling can be achieved without any new emerging-market currency basket. As noted earlier, the global credit derivatives market is fast growing; its main instruments (credit default swaps, credit-linked notes, and collateralized debt obligations) provide protection against credit events; it covers an expanding group of emerging economies; and international banks participate actively in it. An IMF (2003) study reports that the most actively traded contracts reference the external bonds issued by Brazil, Russia, Mexico, Turkey, and Venezuela, and that while activity in Asia has been more limited than elsewhere, credit default swaps are rapidly gaining popularity there too. As outlined earlier, derivatives facilities for hedging currency risk are also available in a top tier of emerging economies, and others are moving up the ladder. Even in cases where capital-account restrictions and other impediments prevent physical delivery of the currency, a nondeliverable forwards market has developed to provide hedging opportunities (see chapter 3). Also, as emphasized by Burger and Warnock (2002), deeper and longer-maturity local bond markets in emerging economies will lead to the creation of a yield curve and derivative instruments that enable decoupling of the bond and currency investment. In short, a new currency basket index is not likely to be the best way to separate credit and currency risk.

We share (with Eichengreen, Hausmann, and Panizza 2002) the view that financial resilience and economic performance in emerging economies would be aided by reforms that would make debt payments more contingent on the debtor's ability to pay. How could debt contracts be designed to achieve this objective and yet maintain the simplicity that is essential if such debt securities are to be easily traded in liquid markets? This is not an easy balance to strike. One proposal worth exploring further would be to encourage both emerging-market debtors and private creditors to issue and accept GDP-indexed dollar-denominated bonds (as a transitional device toward greater reliance on local currency-denominated bonds). Eduardo Borensztein and Paolo Mauro (2002) show that such bonds have several attractive features: they restrict the range of variation of the debt/GDP ratio and hence reduce the likelihood of debt crises; they reduce the need for emerging-market governments to engage in procyclical fiscal policy; they should carry a low insurance premium (reflecting

the very low cross-country comovement of GDP growth rates and hence the largely diversifiable nature of cross-country GDP growth risk for an investor holding a portfolio of GDP-indexed bonds); they would cover a much higher share of output fluctuations for a typical emerging economy than bonds indexed to commodity prices; and they contain certain protections against manipulation and cheating aimed at lowering debt obligations (e.g., it is high, not low, growth that is typically considered a success and gets politicians reelected).

These GDP-indexed bonds might operate as follows.² Instead of an emerging economy with a trend growth rate of 3 percent issuing a plain vanilla bond with, say, an 8 percent coupon rate, this country would issue a GDP-indexed bond where annual coupon payments would be reduced, say, by half a percentage point for every percentage point by which GDP growth falls short of trend (3 percent). If growth turns out to be 1 percent, the coupon would be 7 percent (plus a small insurance premium); in years when growth comes in at 5 percent, the coupon would be 9 percent (plus the same insurance premium).³ Assuming (like Eichengreen, Hausmann, and Panizza 2002) that the nominal exchange rate in emerging economies depreciates in years when growth outcomes (shocks) are poor (worse than trend) and appreciates when they are good, dollar-denominated GDP-indexed bonds would reduce the adverse consequences of currency mismatches. As Borensztein and Mauro (2002) note, global investors are already highly exposed to risk under standard debt contracts. With a standard dollar-denominated bond, bad growth and/or currency developments can render a country's debt unsustainable. Would global investors be better off receiving lower debt repayments through indexation (agreed in advance by the contract) than facing uncertain recovery values through a chaotic default process? Similarly, while standard local currency-denominated debt contracts reduce currency risk for the borrower, the lender must then assume the currency risk and may well be repaid in a depreciated currency if the borrower faces an adverse shock. GDP-indexed bonds could therefore serve as a helpful transition device during the period in which emerging economies are enacting those national policy reforms that would boost sufficiently the confidence of global and local investors to increase the share of local currency-denominated, fixed-rate bonds. Admittedly, GDP-indexed bonds would face the same hurdles of product uncertainty and of coordination problems that typically beset any financial innovation, but (following Borensztein and Mauro 2002) these hurdles could be reduced by some temporary assistance from the official sector (e.g., to set statistical standards and verify

2. The example is taken from Borensztein and Mauro (2002).

3. If a greater degree of cushioning is desired, one could increase the sensitivity of coupon payments to the deviation of GDP growth from trend.

the reliability of national accounts and to foster a dialogue among potential participants in the market for these instruments). On the latter count, it is noteworthy that the official sector has been helpful in promoting the inclusion of collective action clauses in sovereign bond contracts issued under New York law, as several emerging economies have now followed Mexico's recent lead.

